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PROJECT PROGRESS REPORT G-119

THIRD INTERNATIONAL EARLY GROUNDNUT VARIETAL TRIAL

(III IEGVT)

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PROGRESS REPORT

III INTERNATIONAL EARLY GROUNDNUT VARIETAL TRIAL

1. SUMMARY

a. During 1987 and 1988, 32 sets of the III International Early Groundnut Varietal Trial were sent to our cooperators in the semi-arid tropics. Data on 14 sets were received from 10 countries.

b. Lines which significantly outyielded the local cultivars in different countries are as follows.

Country	No. of lines outyielded the local	No. of lines significantly outyielded the local	ICGV# of lines significantly outyielded the local
Nepal	3	1	86015
Vietnam	16	14	86055, 86038, 86053, 86015, 86014 (only top 5)
Somalia	1	0	-
Benin	20	2	86092, 86015
Malawi	22	22	86015, 86061 (stable, high yielding early lines)
India	2	1	86091

c. Based on mean performance across locations and the stability anal.. based on regression approach, ICGV 86055, ICGV 86061, and ICGV 861(. appeared to be high yielders across international environments. These three lines also appeared to be stable in their performance and hence were identified for crossing in the next cycle of crossing and selection.

d. Majority of the lines appeared to be as early as or even earlier than the local variety.

e. Chico had the highest shelling percentage across locations and ICGV 86042, ICGV 86056 and ICGV 86061 equalled Chico in their across-location mean shelling percentage.

2. Introduction.

In 1987, the Third International Early Groundnut Varietal Trial was organized with 23 breeding lines selected primarily for earliness at ICRISAT Center, an early maturing control variety, and a local control variety. The objectives of this trial were -

a. To evaluate the early-maturing groundnut lines developed at ICRISAT Center for the stability of earliness and yield under different agroclimatic conditions and production systems,

b. To provide an opportunity to our cooperators to select useful material adapted to their local conditions, and

c. To identify lines with good adptability and stability for the next cycle of crossing program.

3. Procedure.

Twenty-three early-maturing breeding lines were selected from among the breeding lines developed under the project G-105 (85) IC (Breeding for specific adaptation and requirements- breeding for earliness). These lines were selected from crosses between early-maturing source lines and adapted lines. The selection was for high yield in early harvests (1240 and/or 1475 ^{o}Cd Cumulative Thermal Time, CTT), acceptable levels of kernel maturity and good pod and seed characteristics. Some of the lines were also selected based on the data supplied by our cooperators in the past.

who carried out the International Groundnut Early Maturing Cultivar Trial (IGEMCTs) between 1984 and 1986. Chico, a very early maturing source line was used as a maturity control. A provision was made for the inclusion of a local control variety as the 25th entry in the trial. The trial was designed in a 5 x 5 triple lattice, but with the option to plant it as an RBD being left to the cooperator. Two copies of a field log book containing all details about the conduct of the trial were sent to each location/cooperator. A plot size of 5.0 x 1.2m^2 (gross) and 5.0 x 0.9m^2 (net) were suggested. All other cultural practices (fertilizers, sowing time, irrigations, weeding, plant protection, etc.,) were requested to be followed as per the national recommendations.

Pedigrees and the identities of the varieties are given in Table 1, and their important botanical characteristics are given in Table 2.

Thirty-two sets of the trial were sent to the countries, listed in Tables 3a and 3b. However, experimental data were received back only on 17 trial sets from 10 countries. In Myanmar and Malawi, the trial was conducted in more than one environment (or location). Information management of the trials is summarized in Table 4.

4. Performance of lines in different countries.

Pod yields and other data obtained from our cooperators for different countries/locations/environments are given in Tables 5 to 20, and the countrywise performances are discussed below.

a. Myanmar : Trials were conducted at 3 locations (Tables 5, 6 and 7). Only low yields were realised, perhaps because of low plant

populations. However, both at Yezin and Nyaung, ICGV 86015 outyie Sinpadetha 2(local variety) by 19 and 28 % respectively. Days to harves at Nyaung indicated that this variety was harvested on the same day as Sinpadetha 2. Leafminers and aphids occured in these trials. CVs were high.

b. China : No line outyielded the local control variety indicating possible lack of adaptation in this set of lines to the local environment (Table 8). There was high disease (?) incidence in all the entries.

c. Sudan : The realised yield levels were very low because of low plant populations and none of the entries outyielded the local control variety, Sodiri (Table 9).

d. Nepal : ICGV 86015 with 1.2 t ha^{-1} pod yield significantly outyielded the local control variety, Trishuli Kanchi, by 44 % (Table 10). The other varieties which outyielded Trishuli Kanchi were ICGV 86092 and ICGV 86016 (15 and 10 % higher yields, respectively). The two local varieties, B-4 and Trishuli Kanchi, exhibited relatively higher levels of late leaf spot resistance compared to all the early maturing lines tested. This trial was planted extremely late, and hence the yield levels were very low.

e. Vietnam : Forteen lines significantly outyielded the local control variety, Sen Nighe An (Table 11). The five highest yielding lines were ICGV 86055, ICGV 86038, ICGV 86053, ICGV 86015 and ICGV 86014. ICGV 86055 produced 2.91 t ha^{-1} of dry pods with 78 shelling percentage. All the lines were harvested 1 to 5 days earlier than the control variety. The plant population in the trial was normal and all the lines recorded more than 73 shelling percentage. 100-seed mass was generally high (>40 g), the highest level of 60 g being recorded by ICGV 86094, which was one of the

varieties significantly outyield the local control variety.

f. Somalia : Only one line, ICGV 86042, with 3.41 t ha^{-1} of dry pod yield, outyielded the local control variety Local Small (by 18%) but the yield advantage was statistically nonsignificant (Table 12). When all the lines were harvested at 100 days after sowing, the shelling percentage of ICGV 86042 was 61 compared to 54.1 of Local Small. Nine lines recorded more than 59 shelling percentage.

g. Benin : Twenty out of the twenty-three lines outyielded the local control variety but only two gave significantly higher yields (Table 13). ICGV 86092 and ICGV 86015, with 1.48 and 1.27 t ha^{-1} dry pod yield, were 81 and 55 % higher in pod yield compared to the local variety. Several lines were observed to be earlier than the local variety. Shelling percentage in the local variety was only 57 while in 4 ICRISAT varieties it was more than 70 . The highest shelling percentage of 78 was recorded in ICGV 86017 indicating its relative earliness.

h. Malawi : At Chitedze, Malawi, this trial was conducted over two years (Tables 14 to 17).

1. 1987/88 season : Five of the twenty-three early lines outyielded the local control variety Spancross but only one ICGV 86015, had significantly higher yield. The mean early leaf spot scores indicated that all the lines were equally as susceptible to the disease as Spancross. Though ten of the lines were rated to be equal in duration to the local variety, the one significantly higher yielding line was about seven days later in maturity compared to the local variety.

ii. 1988/89 Season : In this season three sets of the same trial were conducted. There was early planting with early and normal harvests, and normal planting with normal harvest. The harvests were based on CTT accumulation by the crop. The results are as follows:

A. Early Planting - Early Harvesting (when the crop had accumulated about 1200^{O} Cd CTT, = 107 days after sowing) : All the 23 lines tested outyielded the local control variety, Natal Common (plant stand of Natal Common was only 76% of normal). The highest yielding line was ICGV 86061 which produced 1.0 t ha^{-1}. While Natal Common recorded only 59.2 % shelling, sixteen of the test lines recorded more than 65% shelling. The highest yielding line ICGV 86061 recorded more than 70% shelling.

B. Early Planting - Normal harvesting (at 1380 ^{O} Cd CTT= 117 Days after sowing) : All the entries again outyielded the control variety, Natal Common. The two highest yielding lines were ICGV 86061 and ICGV 86105 which produced 1.2 t ha^{-1} of pod yield compared to 0.55 t ha^{-1} of Natal Common. The shelling percentages were more than 68 in all lines and highest shelling of 74.1% was in ICGV 86061. The seed sizes were slightly higher in normal compared to early harvest.

C. Normal Planting - Normal Harvesting (at 1094 and 1224 ^{O}CTT = 97 and 110 days after sowing) : In this environment some lines were harvested in only 97 days because they were mature when only 1094 ^{O} cd had accumulated.All the lines outyielded Natal

Common in spite of an improvement in the plant stand of Natal Common. The highest yielding lines were ICGV 86061 and ICGV 86105 and both recorded more than 0.9 t ha^{-1} dry pod yields with 70 and 72% shelling, respectively.

Taking the seed yield production across seasons and environments into account (Table 18), it was observed that at Chitedze, ICGV 86105 and ICGV 86061 were stable early maturing lines.

i. Sri Lanka : In Sri Lanka, the 3 replications of this trial were grown at 3 different locations and two lines in one of the locations were missing (Table 19). Hence after dropping these two lines from the other locations, the data on only 23 lines were analysed as a RBD with the 3 locations as replications. Though all lines were found to be 1 to 7 days earlier than the local control variety, No. 45, none of them outyielded the local variety. The yield levels realized at all the three locations were high. The shelling percentages in the early lines were slightly higher compared to the local line, while the 100 seed weight were comparable among them.

j. India (Hardoi, U.P.) : Two varieties, ICGV 86091 and ICGV 86015, outyielded the local control variety, G-201. However, only ICGV 86091, with 4.1 t ha^{-1} pod yield gave significantly higher yield compared to G-201.

5. Stability analysis.

In order to identify varieties with wider adaptation, among the early maturing lines included in the trial, data from 8 selected locations (Table 2) were analysed following the procedure of Eberhart and Russel (1966).

Analysis of variance for stability (Table 22) indicated significant genotype x environmental interactions. However, some varieties appeared to be more stable than others. The regression of varietal means on environmental indices (Table 23) indicated that three varieties, ICGV 86055, ICGV 86061 and ICGV 86105 were good yielders across locations and their mean yields were comparable to that of the (variable) local control variety. All the three lines had regression coefficients which were nonsignificantly different from unity indicating their stability across locations. These three varieties appeared to be stable and could be good source lines for the next cycle of crossing and selection.

Efforts to understand the stability of earliness of the lines based on data met with two main constraints.

(a) In spite of requesting our cooperators to harvest the lines at the optimum maturity, at several locations harvesting of all lines were carried out on the same day.

(b) At those locations where lines were harvested at the line's optimum maturity, it was not clear whether the data supplied were for days to maturity, or days to harvest.

Keeping this in view, mean days to harvest was obtained only from those locations where entries were harvested on different days (Table 24). The data indicated that three lines were later than the (variable) local variety by one day, and all others were earlier by one to three days. The earliest was Chico, and five lines compared well with Chico for earliness.

A study of the shelling percentages across locations also met with the same problems as described above. Hence two means - one of those locations where harvesting of all lines was done on the same day (mean 1), and another of the rest of the locations (mean 2) were obtained.

Mean 1 indicated that the lowest shelling percentage of 64 was recorded by the (variable) local variety and ICGV 86015. As expected, Chico had the highest shelling percentage. Three lines, ICGV 86042, ICGV 86056 and ICGV 86061 equalled Chico in shelling percentage. Mean 2 indicated that most of the lines reached high shelling percentages when they were harvested at their respective maturities.

100-seed mass data across locations (Table 2) indicated that except for Chico, all the lines recorded acceptable seed mass. In Vietnam, all lines had generally high seed mass, and among them, ICGV 86094 recorded the highest seed mass of 60 g/100 seeds.

6. Follow Up

Based on these results and those of the previously contucted IGEMCTs, the IV International Early Groundnut Varietal Trial (IV IEGVT) was formulated. ICGV 86015 and ICGV 86055 were carried over from the III IEGVT to the IV IEGVT, and 21 new lines from breeding project on earliness were added. ICGV 86015 and ICGV 86055 were used extensively as stable lines in crossing activities.

REFERENCE

1. Eberhart, S.A. and W.A. Russell. 1966. Stability parameters for comparing varieties. Crop Science, 6: 36-40.

Table: 1 List of entries in the Third International Early Groundnut Varietal Trial (III IEGVT 87)

S.No	ICGV-NO	OTHER-IDENTITY	PEDIGREE
1	ICGV 86038	ICGS(E) 4	(Ah 6279 x TG 16)
2	ICGV 86042	ICGS(E) 8	(NC Ac 17113 x TG 16)
3	ICGV 86045	ICGS(E) 11	(X14-X-X-1-B x Goldin 1)
4	ICGV 86053	ICGS(E) 19	(NC Ac 2748 x Chico)
5	ICGV 86055	ICGS(E) 21	(72-R x Chico)
6	ICGV 86056	ICGS(E) 22	(Ah 65 x Chico)
7	ICGV 86060	ICGS(E) 26	(Tifspan x Var 28-206)
8	ICGV 86061	ICGS(E) 27	(JH 89 x Chico)
9	ICGV 86063	ICGS(E) 30	(Ah 65 x Chico)
10	ICGV 86066	ICGS(E) 36	(TMV 7 x Chico)
11	ICGV 86014	ICGS(E) 52	(Shantung Ku No.203 x Robut 33-1)
12	ICGV 86015	ICGS(E) 56	(ICGS 44 x TG 2E)
13	ICGV 86081	ICGS(E) 95	(Var. 2-5 x Chico)
14	ICGV 86086	ICGS(E) 114	(ICGS 22 x TG 1E)
15	ICGV 86018	ICGS(E) 119	[(Var. 2-5 x NC Ac 741) x PI 337409]
16	ICGV 86017	ICGS(E) 123	[(Var. 2-5 x NC Ac 741) x PI 337409]
17	ICGV 86091	ICGS(E) 125	(TMV 7 x Chico)
18	ICGV 86092	ICGS(E) 128	(TG 16 x GAUG 1)
19	ICGV 86094	ICGS(E) 130	(ICGS 22 x TG 1E)
20	ICGV 86103	ICGS(E) 147	Selection from EC 21137 (ICG 147)
21	ICGV 86105	ICGS(E) 149	Selection from NC Ac 537 (ICG 287)
22	ICGV 86112	ICGS(E) 174	Selection from EC 21034 (ICG 1381)
23	ICGV 86117	ICGS(E) 188	Selection from MF 2 (ICG 3754)
24	Chico (Maturity control)		
25	Local Control		

Table: 2 Botanical characters of the varieties included in the Third IEGVT

S.No	IDENTITY	Branching habit	Botanical type	Seed coat color
1	ICGV 86038	Sequential	Spanish	Tan
2	ICGV 86042	Sequential	Spanish	Tan
3	ICGV 86045	Sequential	Spanish	Tan
4	ICGV 86053	Sequential	Spanish	Tan
5	ICGV 86055	Sequential	Spanish	Tan
6	ICGV 86056	Sequential	Spanish	Tan
7	ICGV 86060	Sequential	Spanish	Tan
8	ICGV 86061	Sequential	Spanish	Tan
9	ICGV 86063	Sequential	Spanish	Tan
10	ICGV 86066	Sequential	Spanish	Tan
11	ICGV 86014	Sequential	Spanish	Tan
12	ICGV 86015	Sequential	Spanish	Tan
13	ICGV 86081	Sequential	Spanish	Tan
14	ICGV 86086	Sequential	Spanish	Tan
15	ICGV 86016	Sequential	Spanish	Tan
16	ICGV 86017	Sequential	Spanish	Tan
17	ICGV 86091	Sequential	Spanish	Tan
18	ICGV 86092	Sequential	Spanish	Tan
19	ICGV 86094	Sequential	Spanish	Tan
20	ICGV 86103	Sequential	Spanish	Tan
21	ICGV 86105	Sequential	Spanish	Tan
22	ICGV 86112	Sequential	Spanish	Tan
23	ICGV 86117	Sequential	Spanish	Pale Tan
24	Chico (Maturity control)	Sequential	Spanish	Tan

Table: 3a List of locations from which data of the Third IBSVT were received in 1988 and 1989

COUNTRY	LOCATION	COOPERATOR NAME AND ADDRESS
MYANMAR	BIFS,Rangoon	Project Director,BIFS, Rangoon MYANMAR
MYANMAR	ARI,Yezin	ARI,Yezin,Pyinmana MYANMAR
MYANMAR	Mandalay Div.	Myaung Oo Farm, Mandalay Div. MYANMAR
CHINA	Ma Rui Huin,Shijia Zuang	Principal Groundnut Breeder, Heba institute of cereal and oil crops, Shi Ga Zhang,Hebei PR CHINA
SUDAN	EL Ahmadi	EL - Gaimi Adam Abdalla Abdalla Western Sudan Agricultural Research Project EL - Obeid Research Station PO Box 429 EL - Obeid, SUDAN
NEPAL	Nawalpur, Sarlahi	Buddhi Prakash Sharma National Oil seeds Development program Nawalpur, Sarlahi,NEPAL
VIETNAM	INSA Ankhana	Tran Van Lai & Nguyen Thuy Quyhe The National Institute of Agricultural Sciences D7, Phnong mai, Dong Da, HANOI
SOMALIA	Alfoi, Agri.Res.Sta.	Abdul Kadir Mohamed Abikar Abdul Kadir Noor Hedefone, Agricultural Research Institute Mogadishu, SOMALIA
BENIN	Cotonou	Dr.Jean Dctongnon,station De Recherche Niaorli via Attogon S/C D.R.A. B.P.884,Cotonou, Republic Populaire Du Benin
MALAWI	Chitedze Agricultural Reseach Station, Lilongwe	Principal Groundnut Breeder, SADCC - ICRISAT Regional Program, Private Bag# 63, Lilongwe, Malawi
SRILANKA	Mahalluppalama, Aralaganwile Ruhuna University	Dr. S. J. B. A. Jayasekara, ARS, Pallekele, Kundasale, SRILANKA
INDIA	Hardoi (U.P)	Dy.Director of Agri.-cum-Officer-in-charge RATDS,Hardoi,U.P

Table: 3b. List of cooperators/locations to which trials were sent, but data have not been received yet.

1. Dr. M.F. Schele, FAO Representative, C/O UNDP, P.O.Box 24, Mogadishu, SOMALIA

2. Mr. Rigoberto Rodriguez V . Ministerio Recursos Naturales, Choluteca, HONDURAS (Central America)

3. Mr. Nestor Bakary Tounkara, Institute Des Sciences Agrozootechniques de Foulaya City, B.P. 156, Kindia, REPUBLIQUE DE GUINEA

4. Dr. Pablito P. Pamplano, Director of Research, University of Southern Mindanao, Kabaccau, Cotabato, PHILIPPINES

5. Dr. Abdul Shakoor, N.D.F.R.S., P.O. Box 340 Machakos, KENYA

6. Dr. Charles Mariotti, Chief Agronomist, Sociedad Industrial Dominicana C. Por A, Santo Domingo, DOMINICAN REPUBLIC

7. Dr. Paschal Watiti Nalyongo, Dept. of Agriculture, Serere Research Station, P.O. Soroti, UGANDA

8. Dr. N.R. Dasari, Principal Agronomist (crops), Department of primary production, Northern Regional Office, P.O. Box 51, Berrimah, N.T 5788, AUSTRALIA

9. Dr. M.A. Hossain. IITA Grain Legumes Breeder, Ghana Grains Development Project, Crops Research Institute, P.O. Box: 3785, Kunasi, GHANA

10. Dr. Fadel Younis Baktash, Plant Breeder, Field Crops Research Center, State Board for Applied Agrl.Research, Abu - Ghraib, Baghdad, IRAQ

11. Dr. Oscar Ndabikingye, Director General, ISABU, B.P. 795, Bujumbura, Burundi, CENTRAL AFRICA.

12. Director of Agricultural Research, P.Bag 0033, Gaborone, BOTSWANA.

13. Directeur U.R.P., d'INA, B.P. 3 N'Dali, Republic of BENIN.

14. Marcos Jbao Freire, Universidade Eduardo Mondlane, Faculty of Agriculture, C.P. 257, Maputo, MOZAMBIQUE.

15. Prinicpal Groundnut Breeder, ICRISAT Sahelian Center, B.P. 12404, Niamey, NIGER.

16. Dr. R.A. Williams, Rice Research Station (Rokupr), c/o Agrl. Development Officer, USAID, Walpole Street, Freetown, SIERRA LEONE.

17. Cishahayo David, ISAR-Karama, B.P. 121, Kigali, Rwanda, CENTRAL AFRICA.

18. C.T. Nkwanyama, Chief Research Officer, Ministry of Agriculture and Cooperatives, Agricultural Research Division, P.O. Box 4, Malkerns, SWAZILAND.

19. Ing. Horacio A. Juarez Arellano, Gerente General, Instituto De Ciencia Y Technologia Agricolas, Avenida Reforma 8-60 Zona 9, Edificio "Galerias Reforma", Guatemala (CENTRAL AMERICA).

20. M/s. Liu Sheng Yi/Liao Boshou, Oil Crops Research Institute, Chinese Academy of Agricultural Science, Wuchang, Wuhan, Hubei Province 430 062, P.R. of CHINA.

Table: 4a Information on management of trials at various locations

COUNTRY	DATE OF PLANTING	TYPE OF PLANTING	FERTILIZERS APPLIED(KG/HA) N	P2O5	K2O	GYPSUM	OTHERS	PLOT SIZE GROSS	NET	SPACING
MYANMAR	13.6.87	WET	-	124.0	62.0	225.45	Lime powder	5.0 X 1.2M	5.0 X 1.2M	30 X 10CM
MYANMAR	28.6.88	WET	-	124.0	62.0	225.45	-	5.0 X 1.2M	5.0 X 1.2M	30 X 10CM
MYANMAR	16.9.88	DRY	-	28 3	18.87	224.64	3708.5FYM	5.0 X 1.2M	5.0 X 1.2M	30 X 10CM
CHINA	13.5 87	WET	38	90.0	-	-	FYM	5.0 X 1.2M	5.0 X 0.9M	30 X 10CM
SUDAN	17.7.88	WET	-	-	-	-	-	-	4.0 X 3.0M	60 X 15CM
NEPAL	21.6.87	WET	20	40.0	20.0	-	-	5.0 X 1.2M	5.0 X 0.9M	30 X 10CM
VIETNAM	14.3.88	WET	40	200.0	40.0	250.0	-	-	4.0 X 1.5M	-
SOMALLIA	18.5.87	WET	-	46.0	-	-	-	5.0 X 1.2M	5.0 X 0.9M	30 X 10CM
BENIN*	-	-	-	-	-	-	-	5.0 X 1.2M	5.0 X 0.9M	30 X 10CM
MALAWI-1	10.12.87	WET	-	50 0	-	-	-	8.0 X 2.4M	8.0 X 2.4M	60 X 15CM
MALAWI-2	7.12.88	(Two harvests)	-	50.0	-	-	-	8.0 X 2.4M	8.0 X 2.4M	60 X 15CM
MALAWI-3	6.1.89		-	50.0	-	-	-	8 0 X 2.4M	8.0 X 2.4M	60 X 15CM
SRILANKA*	-	-	-	-	-	-	-	5.0 X 1.2M	5.0 X 0.9M	30 X 10CM
INDIA	25.6.88	DRY	20	50	50	150	-	5.0 X 1.2M	5.0 X 1.2M	30 X 10CM

* Plot size assumed by default as reqested in the log book.

Table 4b. INDEX

DE = Days to 75% emergence
DF = Days to 75% flowering
FS = Final plant stand count
DH = Days to harvest
PY = Pod yield
SY = Seed yield
SHP = Shelling percentage
SMS = Sound mature seed percentage
HSW = 100 seed weight (g)
SAU = Seed appearence and uniformity
(1 - 9 scale) 1=excellent appearence and uniformity, 9=poor appearence and uniformity
PD Sc = Pest and disease score
(1 - 9 scale) 1=highly resistant, 9=highly susceptible
OIL = oil content
PRO = Protien content
EF = Efficiency over RBD

Table: 8 Summary of performance of early varieties included in the Third IESVT

Location: BISP

Country : MYANMAR Date of Planting: Jun 13, 1987

ICGV#	ENT#	PY KG/HA	RANK	%OVER SINPA	DF	FS (Plot)	DH	SHP	SMB	HSW	SAU	PD	Sc
86063	9	960	2	83	26.4	51	90.0	68.3	47.7	33.8	4	5	
86015	12	960	3	83	28.2	59	93.0	67.3	31.3	30.1	4	5	
86092	18	810	4	53	25.4	58	93.0	64.7	47.4	32.6	3	5	
86091	17	780	5	51	24.0	69	88.0	61.3	38.3	26.5	4	4	
86014	11	780	6	51	28.0	48	90.0	66.0	30.1	29.6	3	5	
86056	6	770	7	50	24.1	57	88.0	65.0	59.9	25.1	2	4	
86094	19	700	8	46	30.1	46	90.0	68.0	28.3	32.3	5	5	
86045	3	670	9	44	24.0	68	89.0	67.0	53.5	29.1	3	5	
86088	14	640	10	42	24.6	59	90.0	65.0	54.7	28.4	3	5	
86066	10	630	11	41	24.2	67	88.0	65.7	50.4	32.3	3	5	
86117	23	630	12	41	23.9	57	90.0	63.7	70.7	27.2	4	5	
86055	5	610	13	40	23.9	58	88.0	67.7	52.3	29.6	3	5	
86061	8	600	14	39	24.4	49	88.0	69.7	47.3	29.3	3	5	
86060	7	600	15	39	24.1	51	88.0	67.7	42.6	25.3	3	4	
86038	1	580	16	38	24.1	56	89.0	65.3	50.9	28.2	3	5	
86018	15	560	17	37	24.0	54	88.0	69.0	33.1	29.4	4	5	
86105	21	530	18	35	24.0	78	88.0	66.3	39.3	31.1	4	5	
86042	2	520	19	34	24.1	51	88.0	65.7	56.8	28.4	2	5	
86053	4	490	21	32	24.1	43	88.7	66.0	51 0	25.6	3	5	
86103	20	470	22	31	24.1	58	93.0	62.7	43.6	31.8	4	5	
86081	13	430	23	28	24.7	47	86.7	66.3	56.4	24.4	3	5	
86017	16	370	24	24	28.7	59	89.0	66.7	41.5	30.3	4	5	
86112	22	360	25	23	24.0	55	89.3	64.0	47.0	35.5	5	5	
Controls:													
SINPA	25	1530	1	100	28.7	95	88.0	64.3	54.2	41.7			
DETHA 2													
CHICO	24	500	20	33	24.0	50	85.0	66.3	46.8	20.8	2	4	
SE±		120.0			0.8	7	0.3	2.7	3.7	2.0			
GM		658.8			25.2	58	89.1	66.0	47.0	29.6			
CV(%)		31.8			5.4	22	0.5	7.2	13.7	11.8			
EF		138.8			100.8	105	97.4	89.9	144.2	100.8			

Table: 6 Summary of performance of early varieties included in the Third IECVT

Location : Yezin — Date of planting : 26 AUG 19[illegible]
Country : MYANMAR

Entry	E_No	PY (kg/ha)	Rank	%over Strea	FS (ha)	DF	SHP	SNS	HSW	SAU
ICGV 86015	12	780	1	1[illegible]3	174355	22	74.9	87.3	35.4	4.7
ICGV 86053	4	690	2	1[illegible]4	171992	23	76.8	87.0	27.6	3.0
ICGV 86112	22	650	4	8[illegible]	153950	22	71.5	90.7	33.9	3.0
ICGV 86042	2	640	5	3[illegible]	145778	25	71.0	75.4	37.6	3.7
ICGV 86091	17	630	6	9[illegible]	159056	25	77.9	87.7	30.7	3.7
ICGV 86086	14	630	7	9[illegible]	133344	24	72.3	78.7	27.9	4.7
ICGV 86045	3	590	8	9[illegible]	153377	23	71.1	89.2	30.8	3.7
ICGV 86014	11	540	9	9[illegible]	111141	23	72.0	77.6	33.1	4.0
ICGV 86103	20	530	10	8[illegible]	154139	21	71.7	86.4	32 3	5.3
ICGV 86038	1	520	11	7[illegible]	118660	22	76.2	71.3	30.9	4 0
ICGV 86117	23	500	12	7[illegible]	149899	22	72.9	97.3	28.2	3.7
ICGV 86060	7	430	13	6[illegible]	124782	23	72.2	76.0	32.2	3.7
ICGV 86016	15	420	14	6[illegible]	112474	22	73.7	61.4	38.9	4.0
ICGV 86056	6	420	15	6[illegible]	90587	22	76.1	81.0	28.3	3.3
ICGV 86081	8	390	16	6[illegible]	98756	23	76.8	71.7	29.2	4.0
ICGV 86105	21	390	17	5[illegible]	112681	22	71.0	89.4	35.3	6.0
ICGV 86063	9	370	18	5[illegible]	70623	24	75.2	74.0	36.7	4.7
ICGV 86017	16	360	19	5[illegible]	81518	26	73.4	72.7	38.5	3.7
ICGV 86094	19	350	20	5[illegible]	107057	23	70.5	68.0	31.9	5.0
ICGV 86055	5	350	21	5[illegible]	121066	24	75.7	80.7	31.2	3.7
ICGV 86066	10	290	22	4[illegible]	105866	24	77.1	87.7	29.9	3.0
ICGV 86092	18	240	23	3[illegible]	84224	21	72.3	80.0	27.8	5.0
ICGV 86081	13	100	24	1[illegible]	72773	22	75.7	74.7	29.3	4.0
Controls										
SINPADETHA 2	25	860	3	1[illegible]	98760	23	78.4	88.3	41.4	2.7
CHICO	24	70	25	1[illegible]	25355	22	77.0	80.4	24.2	3.3
SE+		80.0			17125					
GM		461.3			116488					
CV(%)		31.1			25					
EF		106.7			111					

Table: 7 Summary of performance of early varieties included in the Third IEGVT

Location : Nyaung Date of planting : 18 SEP 1988
Country : MYANMAR

Entry	E_No	PY (kg/ha)	Rank	Cover Stage	PS (ha)	DE	DF	DH	SHP	SMS	HSW	P Sc	D Sc
ICGV 86015	12	240	1	128	164976	7	19	108	69.7	89.8	35.3	3.7	7.0
ICGV 86014	11	170	3	93	142813	7	21	113	70.9	84.1	33.9	4.7	6.0
ICGV 86042	2	150	4	79	215188	6	19	99	62.2	80.4	29.5	5.0	4.3
ICGV 86094	19	140	5	75	138427	7	21	88	63.5	80.9	29.7	5.3	5.7
ICGV 86056	6	130	6	70	220380	6	18	96	69.9	86.7	23.9	5.7	5.7
ICGV 86038	1	120	7	62	173842	8	19	118	66.9	82.2	28.0	6.3	4.0
ICGV 86045	3	110	8	61	187815	8	19	103	71.0	82.2	26.1	7.0	5.7
ICGV 86055	5	110	9	58	193526	6	18	118	70.4	73.8	27.5	6.7	6.0
ICGV 86060	7	100	10	56	181806	6	20	125	69.0	84.6	28.6	5.0	5.0
ICGV 86053	4	100	11	56	202545	6	19	105	70.9	86.2	23.4	5.7	5.0
ICGV 86066	10	100	12	56	194416	6	18	113	71.2	82.3	27.7	5.7	5.7
ICGV 86063	9	100	13	55	98875	10	17	109	72.6	89.4	35.0	6.7	6.3
ICGV 86103	20	100	14	53	174598	6	18	124	64.4	80.2	30.4	6.0	2.0
ICGV 86086	14	100	15	51	125851	7	21	95	61.4	79.8	22.6	5.7	5.0
ICGV 86092	18	90	16	51	95959	9	17	82	64.8	80.6	24.7	3.7	1.0
ICGV 86117	23	90	17	48	160706	6	19	125	61.6	86.1	27.9	5.0	4.3
ICGV 86061	8	90	18	48	166459	6	18	107	70.9	81.4	26.4	7.3	4.0
ICGV 86105	21	90	19	48	160519	6	20	118	62.2	80.7	30.6	6.3	1.7
ICGV 86091	17	80	20	44	152083	7	20	117	68.8	82.5	25.5	6.0	4.0
ICGV 86112	22	70	21	40	173044	6	19	99	57.6	80.6	27.5	7.0	1.7
ICGV 86016	15	50	22	28	138690	6	20	113	64.1	79.2	27.6	7.0	3.7
ICGV 86081	13	50	23	27	133212	7	18	121	71.8	75.4	28.4	6.3	5.0
ICGV 86017	16	50	24	26	118871	6	20	113	62.1	85.0	28.7	6.7	2.3
Controls:													
SINPADETHA	25	190	2	100	185056	7	21	106	68.9	91.5	36.4	6.7	3.
CHICO	24	30	25	18	110881	7	18	112	69.3	87.8	15.1	9.0	2.3
SE±		20.0			9005								
GM		106.9			159533								
CV(%)		28.3			9								
EF		101.5			103								

Table: 8 Summary of performance of early variation included in the Third IEGVT

Location:Shiga Zhang Date of planting : 13 MAY 1987
Country : CHINA

ICGV#	ENT#	PY KG/HA	RANK	%Over Loc.	SHP	SMB	HSW*	DE	DF	DM
86105	21	3230	2	67	75.0	93.4	167.5	9	21	124
86103	20	3080	3	64	75.0	94.5	151.0	9	21	124
86112	22	3000	4	82	72.2	89.5	168.0	9	22	124
86081	8	2840	5	59	77.5	88.5	109.0	9	24	124
86055	5	2690	6	56	75.5	98.0	111.0	9	22	124
86066	10	2640	7	55	77.2	89.7	100.0	9	24	124
86038	1	2580	8	53	77.2	93.2	101.0	9	21	124
86015	12	2500	9	52	77.3	75.2	117.0	10	27	124
86092	18	2500	10	52	74.0	74.6	104.0	9	25	124
86042	2	2430	11	50	74.5	82.0	106.0	9	22	124
86117	23	2420	12	50	75.5	89.6	123.0	9	22	124
86094	19	2400	13	50	72.0	86.4	124.0	9	25	124
86056	6	2400	14	50	77.0	92.5	89.0	9	23	124
86014	11	2390	15	49	75.0	84.0	125.0	10	25	124
86060	7	2300	16	48	74.5	81.0	104.5	9	22	124
86086	14	2270	17	47	75.0	83.0	110.5	9	25	124
86018	15	2180	18	45	74.5	79.3	119.0	9	25	124
86053	4	2000	19	41	75.0	85.0	110.0	9	22	124
86017	16	1880	20	39	75.5	90.5	118.5	9	24	124
86091	17	1810	21	37	76.5	90.0	100.0	10	21	124
86045	3	1750	22	36	72.8	82.0	102.5	9	22	124
86083	9	1710	23	35	77.5	95.0	98.5	9	29	124
86081	13	1650	24	34	75.4	81.0	100.0	10	22	124
Controls:										
LOCAL	25	4840	1	100	71.2	71.6	224.0	9	22	124
CHICO	24	1070	25	22	78.0	92.5	72.0	10	21	124
SE±		230.0								
GM		2422.5								
CV(%)		18.2								
EF		101.6								

* not clarified in the log book

Table: 9 Summary of performance of early varieties included in the Third IESVT

Location : El Obeid **Date of planting : 17 JUL 1988**
Country : SUDAN

Entry	E_No	PY (kg/ha)	Rank	%over Sodiri	FS (ha)	DF	DM	SHP	SHB	HSW
ICGV 86103	19	480	2	65	39722	29	78	65	60	41
ICGV 86053	4	360	3	51	30833	29	79	71	61	37
ICGV 86017	15	340	4	48	29167	29	78	66	55	41
ICGV 86091	16	330	5	47	26944	29	79	75	64	38
ICGV 86112	21	320	6	46	35000	30	78	69	62	44
ICGV 86042	2	310	7	44	28889	31	78	70	59	37
ICGV 86105	20	310	8	44	27222	29	82	57	47	36
ICGV 86117	22	310	9	44	40833	29	79	67	56	37
ICGV 86081	12	310	10	43	31389	29	79	61	64	38
ICGV 86016	14	300	11	43	28055	31	79	69	57	45
ICGV 86055	5	300	12	42	29444	32	78	69	63	38
ICGV 86061	8	300	13	42	30833	29	79	68	61	42
ICGV 86068	9	300	14	42	30000	29	78	72	64	43
ICGV 86014	10	300	15	42	27778	31	79	70	63	44
ICGV 86060	7	290	16	40	33611	31	78	66	60	38
ICGV 86094	18	250	17	38	30278	29	81	55	44	42
ICGV 86056	6	250	17	36	13889	29	79	62	55	35
ICGV 86038	1	250	18	35	24445	30	79	71	55	45
ICGV 86092	17	240	19	34	30000	31	78	69	62	38
ICGV 86015	11	240	20	33	26667	29	80	65	53	42
ICGV 86045	3	230	21	32	26945	29	79	71	64	37
ICGV 86088	13	40	23	6	5833	29	85	34	32	34
Controls:										
CHICO	23	110	22	16	24444	29	78	69	58	29
SODIRI	24	710	1	100	48333	29	78	74	64	38
SE±		48.9			4090.6					
GM		300			29190					
CV(%)		27.2			24.3					
CD		133.6			11644.5					

Note: ICGV 86063 did not germinate properly, so deleted from analysis.

Table: 10 Summary of performance of early varieties included in the Third IECVT

Location: Nawalpur
Country : NEPAL Date of Planting: Aug 21, 1987

ICGVs	ENTs	PY (kg/ha)	RANK	%Over Trishuli	DF	FB (plot)	LATE LEAF SPOT
86015	12	1200	1	144	30.0	184	7.0
86092	18	950	2	115	27.7	153	7.0
86016	15	910	3	110	29.3	169	8.0
86045	3	800	5	97	27.7	171	8.0
86038	1	770	6	92	26.0	175	8.0
86094	19	740	7	90	29.3	168	7.0
86103	20	720	8	86	26.0	177	8.0
86061	8	680	9	82	27.0	172	7.3
86117	23	670	10	81	25.0	142	7.3
86091	17	670	11	80	29.3	147	7.0
86053	4	660	12	79	28.7	168	7.7
86055	5	630	14	75	28.0	139	8.0
86086	10	580	15	67	27.0	161	7.7
86042	2	530	16	64	26.0	157	7.7
86080	7	530	17	64	29.3	178	8.0
86088	14	530	18	64	29.3	141	7.0
86056	6	480	19	58	27.0	147	8.0
86081	13	420	20	51	26.0	142	8.0
86105	21	420	21	50	26.0	183	7.3
86112	22	330	22	40	28.7	181	8.0
86063	9	310	24	38	30.0	72	7.7
86017	16	290	25	35	28.7	179	8.0
Controls:							
TRI-SHULI	25	830	4	100	30.0	155	4.7
KANCHI B-4	11	630	13	76	30.0	92	5.0
CHICO	24	320	23	38	25.0	179	8.0
SE±		100.0			0.8	13	0.2
GM		823.1			27.9	157	7.4
CV(%)		27.7			5.0	14	4.4
EF		103.6			88.8	101	89.8

Note: ICGV 86014 was not included in the trial.
Instead the local variety, B-4 was included as an additional control variety.

Table: 11 Summary of performance of early varieties included in the Third IEGVT

Location IRRI,Hanoi
Country VIETNAM

Date of Planting : 14 MAR '88

Entry	E_No	PY (Kg/ha)	Rank	% over San Nghe An	FS (ha)	SHP	HSW	DE	DF	DM	SHS	SAV	PD Sc
ICGV 86055	5	2910	1	131	295595	78.1	51.2	13	46	114	85	5	3
ICGV 86038	1	2880	2	129	325752	77.1	48.4	13	48	113	90	3	3
ICGV 86053	4	2810	3	126	246627	76.8	42.3	14	48	113	90	3	5
ICGV 86015	12	2700	4	121	198263	74.2	56.1	14	47	113	85	5	3
ICGV 86014	11	2690	5	121	236824	76.4	52.5	14	47	113	70	7	5
ICGV 86042	2	2650	6	119	269225	76.4	51.6	14	47	113	90	3	5
ICGV 86081	8	2610	7	117	202301	76.6	49.4	13	46	113	90	3	5
ICGV 86103	20	2510	8	113	219317	77.9	47.5	13	47	113	85	5	7
ICGV 86045	3	2500	9	113	228639	78.2	43.1	14	46	113	85	5	3
ICGV 86094	19	2500	10	113	208581	73.2	60.0	14	46	113	70	7	5
ICGV 86117	23	2490	11	112	271797	76.1	40.9	13	46	113	70	7	7
ICGV 86051	13	2430	12	109	206237	77.7	51.2	14	47	113	90	3	5
ICGV 86088	14	2370	13	106	199869	73.7	46.5	13	47	114	70	7	5
ICGV 86066	10	2320	14	105	218481	78.1	48.6	13	46	113	90	3	3
ICGV 86060	7	2240	15	101	197039	78.0	54.8	14	46	114	90	3	5
ICGV 86092	18	2240	16	101	212305	70.5	44.7	14	46	113	85	5	7
ICGV 86091	17	2150	18	97	201548	73.8	51.1	14	46	115	85	5	5
ICGV 86063	9	2140	19	96	224151	77.1	52.3	14	46	115	90	3	7
ICGV 86016	15	2120	20	95	236789	76.6	50.6	14	46	116	85	5	7
ICGV 86058	6	2100	21	95	233144	78.1	47.9	14	47	114	90	3	5
ICGV 86105	22	2090	23	94	228731	74.8	51.0	14	46	113	70	7	7
ICGV 86112	21	2090	22	94	211342	74.9	54.8	13	47	113	70	7	9
ICGV 86017	16	1960	25	84	233609	78.6	54.3	14	46	116	85	5	
Controls													
Sen Nghe An	25	2220	17	100	232[illegible]	78.3	44.9	13	46	116	90	3	9
CHICO	24	1920	24	87	212859	76.2	31.4	13	46	111	85	5	9
SE±		30.0			1822	0.1	0.2						
GM		2382.3			229977	76.4	49.0						
CV(%)		2.3			1	0.2	0.5						
EF		104.8			136	100.5	103.1						

Table: 12 Summary of performance of early varieties included in the Third IEGVT

Location: ARS,Hogadishu
Country : SOMALIA Date of planting: May 18.1987

ICGV#	ENT#	PY (kg/ha)	RANK	%Over L.Small	FS (plot)	SHP
86042	2	3410	1	118	43	61.0
86066	10	2850	3	99	48	53.5
86105	21	2810	4	97	43	57.2
86014	11	2700	5	84	44	54.5
86017	16	2700	6	94	46	46.7
86112	22	2630	7	91	38	55.6
86055	5	2560	8	88	40	59.6
86058	6	2510	9	87	41	60.8
86081	13	2410	11	83	42	59.5
86045	3	2190	12	76	36	59.3
86016	15	2150	13	74	47	46.8
86063	9	2150	13	74	50	51.6
86060	7	2110	14	73	45	59.7
86061	8	2070	15	72	46	59.5
86086	14	2070	16	72	46	53.6
86117	23	2000	17	69	43	56.5
86092	18	1930	18	67	43	55.4
86094	19	1810	19	63	33	60.9
86015	12	1810	19	63	44	51.9
86091	17	1780	20	62	40	56.3
86038	1	1670	21	58	42	56.5
86103	20	1590	22	55	41	46.7
86053	4	1520	23	53	32	59.3
Controls						
L Small	25	2890	2	100	48	54.1
CHICO	24	2440	10	85	4.	57.4
SE+		440.0			5	4.8
CM		2270.8			43	55.8
CV(%)		33.5			20	14.8
EF		81.0			110	88.6

Table: 13 Summary of performance of early varieties included in the Third IEGVT

Location: Cotonou
Country : BENIN Date of planting: 23 April 1987

ICGV#	ENT#	PY (kg/ha)	RANK	%Over LOCAL	PS (ha)	DF	DM	SHP	HSW	SAU	PD Sc
86092	18	1480	1	181	105325	22	90	59	40	4	2
86015	12	1270	2	155	108196	25	96	56	40	5	1
86014	11	1210	3	148	111749	26	92	70	40	4	2
86056	8	1180	4	144	120447	22	86	63	30	3	2
86091	17	1120	5	137	112112	24	90	50	35	3	2
86055	5	1110	6	136	115935	23	90	63	40	3	2
86045	3	1110	7	136	118170	23	86	61	30	4	2
86038	1	1100	8	134	105231	22	88	46	40	3	1
86061	8	1070	9	130	83293	25	90	63	30	4	2
86094	19	1050	10	128	84403	26	92	59	40	5	2
86053	4	1040	11	127	120948	23	88	70	35	4	2
86060	7	1040	12	127	118638	25	90	61	40	3	2
86017	16	1010	13	123	115245	26	92	78	40	3	2
86042	2	1000	14	122	120923	22	90	57	35	4	2
86063	8	970	15	119	105149	25	92	62	40	3	2
86081	13	970	16	118	105162	22	70	63	35	3	2
86103	20	960	17	118	127750	23	89	59	40	3	2
86086	14	950	18	116	101857	21	85	65	30	4	2
86088	10	930	19	114	119808	25	89	55	40	3	2
86016	15	890	20	108	88699	26	90	58	40	4	2
86112	22	800	23	97	121205	22	88	50	35	3	2
86117	23	750	24	92	89892	22	92	77	30	3	2
86105	21	630	25	77	123629	21	80	69	40	3	2
Controls:											
CHICO	24	810	22	89	125079	22	68	55	25	5	2
LOCAL	25	820	21	100	80013	27	90	57	40	3	2
SE±		160.0			8546						
GM		1011.1			109468						
CV(%)		28.1			13						
EF		108.4			101						

Table: 14 Summary of performance of early varieties included in the Third IECVT

Location: Chitedze
Country : MALAWI Date of planting: 10 Dec 1987

ICGV#	SY (kg/ha)	PY (kg/ha)	RANK	SHP	HSW	FS%	DM	MEAN EARLY LEAF SPOT Sc
86105	1351	1903	1	71	37	94	111	9
86103	1231	1759	2	70	27	94	111	9
86016	1149	1553	4	74	34	91	103	9
86017	1129	1505	5	75	32	94	103	9
86055	1128	1589	6	71	29	92	104	9
86053	1124	1561	7	72	27	90	104	9
86045	1115	1487	8	75	29	93	104	9
86061	1079	1499	9	72	30	89	111	9
86112	1049	1437	10	73	31	90	103	9
86014	1048	1456	11	72	32	88	111	9
86066	1022	1400	12	73	26	90	104	9
86038	1012	1386	13	73	19	82	104	9
86056	999	1407	14	71	26	93	104	9
86117	982	1403	15	70	24	90	111	9
86092	958	1349	16	71	32	88	111	8
86042	953	1342	17	71	26	92	104	9
86060	888	1251	18	71	29	87	111	9
86091	883	1177	19	75	25	91	111	9
86094	872	1321	20	66	26	88	111	9
86081	783	1087	21	72	28	80	111	9
86015	750	1119	22	67	32	91	111	9
86086	638	898	23	71	29	58	111	9
86083	408	551	25	74	36	38	111	8
Controls:								
Span cross	1153	1558	3	74	23	97	104	9
Chico	557	763	24	73	21	75	103	9
SE±	90.9							
GM	970.4			71.9	28.4	86.1	107.5	8.9
CV(%)	16.2							

Table: 15 Summary of performance of early varieties included in the Third IEGVT

Location: Chitedze

Country : MALAWI Planted 7.12.88 Harvested:20.3.89 (107Days = 1200°Cd)First harvest

ICGV#	ENT#	PY (kg/ha)	SY (kg/ha)	SHP	HSW	PS (%)	DM	D Sc	Seed coat colour	Sucking pest sc	Defoliating pest sc
88061	8	1000	704	70.4	23.8	93	107	6.5	Tan	5.0	3.7
88055	5	986	674	68.4	22.4	90	107	7.0	Tan	5.0	3.8
88053	4	970	650	67.8	26.7	87	107	7.5	Tan	4.0	4.0
88105	21	963	637	66.2	24.6	88	107	6.5	Tan	4.3	3.7
88042	2	881	595	69.0	20.1	93	107	7.0	Tan	5.7	4.0
88112	22	856	595	69.5	22.6	95	107	8.0	Red	2.3	3.7
88066	10	852	578	67.9	19.4	94	107	7.0	Tan	4.0	3.0
88018	15	829	572	69.0	22.8	89	107	8.0	Tan	2.7	3.3
88060	7	870	560	64.1	20.6	93	107	6.5	Tan	4.3	3.3
88091	17	806	545	67.5	19.7	94	107	7.0	Tan	4.0	3.0
88056	6	764	535	70.2	19.7	95	107	6.5	Tan	3.7	3.7
88094	19	852	531	62.2	22.3	93	107	7.5	Tan	4.0	3.3
88086	14	824	529	64.0	19.9	91	107	7.0	Tan	5.7	3.7
88081	13	778	526	67.4	20.2	93	107	7.0	Tan	3.7	3.0
88045	3	792	522	65.7	18.8	91	107	6.0	Tan	3.3	3.8
88103	20	773	500	64.7	20.1	91	107	7.0	Red	3.3	4.0
88038	1	704	489	69.3	21.8	86	107	8.5	Tan	4.3	2.9
88014	11	782	466	59.5	21.8	95	107	6.5	Tan	5.7	3.0
88017	16	634	430	67.9	21.2	92	107	7.5	Tan	3.0	3.0
88015	12	663	424	58.2	23.1	96	107	7.0	Tan	6.7	4.0
88117	23	611	415	67.6	19.1	90	107	7.0	Tan	3.3	3.7
88083	9	634	411	64.8	26.8	91	107	7.0	Tan	5.0	4.0
88092	18	625	372	59.3	25.9	95	107	8.0	Tan	4.3	3.0
Controls											
CHICO	24	681	488	72.0	17.1	92	107	8.5	Tan	3.7	3.0
Natal common	25	356	212	59.2	14.8	76	107	6.5	Tan	4.0	3.3
SE±		67.8	48.5	1.21	1.24	2.7		0.33		0.35	0.32
GM		779	518	66.1	21.4	91		7.0		4.2	3.5
CV(%)		15.9	16.9	3.2	10.1	5.2		8.8		15.2	15.7

Scored 100 DAS using a 1-9 scale where 1 = no disease and
9 = 50-100% defoliation

Table: 16 **Summary of performance of early varieties included in the Third IEGVT**

Location: Chitedze
Country: MALAWI-2 Planted: 7.12.88 Harvested: 3.4.89 (117Days = 1350°Cd)second harvest

ICGV#	ENT#	PY (kg/ha)	SY (kg/ha)	SHP	HSW	FS (%)	DH	Seed coat colour
86061	8	1176	871	74.1	28.9	91	117	Tan
86105	21	1204	859	71.3	31.3	97	117	Red
86045	3	1093	809	74.1	25.5	92	117	Tan
86055	5	1093	786	72.0	26.7	91	117	Tan
86091	17	1056	777	73.7	25.5	94	117	Tan
86060	7	1083	773	71.4	24.0	92	117	Tan
86042	2	1042	762	73.2	26.1	96	117	Tan
86014	11	1042	732	70.2	29.1	94	117	Tan
86053	4	970	706	72.7	25.3	94	117	Tan
86086	14	977	698	71.5	25.9	87	117	Tan
86058	6	926	695	75.1	23.4	97	117	Tan
86088	10	926	679	73.3	23.2	92	117	Tan
86094	19	986	673	68.2	27.3	95	117	Tan
86081	13	903	659	73.0	24.2	89	117	Tan
86103	20	926	639	69.0	23.1	98	117	Red
86112	22	875	639	72.8	25.8	95	117	Red
86038	1	801	586	73.6	25.7	94	117	Tan
86092	18	843	581	69.1	29.4	97	117	Tan
86017	16	796	579	72.7	25.1	93	117	Tan
86063	9	758	555	73.0	32.0	90	117	Tan
86117	23	778	538	69.6	23.5	95	117	Tan
86015	12	764	526	69.0	29.9	96	117	Tan
86018	15	718	522	72.7	26.8	85	117	Tan
Controls								
CHICO	24	579	422	73.2	18.4	88	117	Tan
Natal common	25	551	395	71.7	20.7	74	117	Tan
SE+		72.0	52.4	0.93	0.77	2.5		
GM		814	659	72.0	25.8	91	117	
CV(%)		13.8	13.8	2.4	5.2	4.7		

Table: 17 Summary of performance of early varieties included in the Third IECVT

Location: Chitedze
Country : MALAWI-3 Planted:8.1.89. Harvested:13&26.4.89 (978|100DAS = 1094|1224 °Cd)

ICGV#	ENT#	PY (kg/ha)	SY (kg/ha)	SHP	HSW	PS (%)	DM	MeanELS Sc(1-9)	Seed coat colour	Sucking pest sc	Defoliating pest sc
86061	8	953	687	72.2	25.6	94	110	5.0	Tan	4.0	3.8
86105	21	929	652	70.4	25.8	98	110	4.0	Red	5.4	4.8
86055	5	884	618	69.7	21.8	87	106	5.5	Tan	4.8	4.2
86060	7	812	581	71.6	23.3	95	110	5.0	Tan	3.7	4.3
86045	3	798	577	72.4	23.1	93	110	5.0	Tan	2.3	2.8
86038	1	785	566	74.1	21.9	96	110	5.5	Tan	4.3	3.5
86053	4	775	558	71.5	21.7	91	110	6.0	Tan	4.5	4.1
86086	14	773	555	71.5	23.4	97	110	5.5	Tan	4.8	3.0
86014	11	804	553	68.8	25.0	88	110	5.5	Tan	3.9	2.8
86081	13	740	537	73.1	20.2	93	110	6.0	Tan	3.8	3.8
86092	18	717	515	72.1	33.1	95	110	5.0	Tan	3.1	3.2
86088	10	722	510	71.0	19.5	94	106	5.0	Tan	3.0	4.4
86017	16	738	509	69.2	20.4	93	101	6.0	Tan	3.0	4.1
86091	17	685	493	72.2	22.4	98	110	5.5	Tan	3.4	3.7
86056	6	644	483	74.8	20.6	95	110	6.0	Tan	2.8	3.8
86103	20	693	465	67.4	18.5	92	106	4.0	Red	4.2	4.0
86042	2	633	461	72.5	24.4	89	110	5.5	Tan	4.1	3.8
86083	9	650	456	70.0	29.2	90	110	5.0	Tan	4.8	3.9
86094	19	687	451	65.7	26.7	92	110	6.5	Tan	4.4	4.0
86117	23	620	447	72.2	20.2	89	110	5.0	Tan	4.0	2.5
86016	15	632	429	68.5	18.9	91	97	6.5	Tan	3.0	3.2
86015	12	613	429	69.8	31.7	94	110	6.5	Tan	3.8	3.2
86112	22	608	406	67.5	17.8	93	101	6.0	Red	3.1	3.3
Controls:											
CHICO	24	623	445	71.1	17.9	99	106	6.5	Tan	3.9	3.8
Natal common	25	462	338	74.2	20.9	83	110	5.5	Tan	2.4	3.2
SE±		42.2	33.3	1.18	1.05	2.8	2.1	0.34		0.42	0.44
GM		718	509	70.9	23.0	93	108	5.5		3.7	3.8
CV(%)		10.2	11.3	2.9	7.8	5.4	3.5	8.7		19.5	21.7

Scored 70 DAS using a 1-9 scale where 1 = no disease and
9 = 50-100% defoliation

Table. 18 Performance of lines across seasons at Chitedze, Malawi

ENT#	IDENTITY	SEED YIELD (KG/HA)				SHELLING %				100 SEED MASS			
		1987/88	1988/89			1987/88	1988/89			1987/88	1988/89		
			I	II	III		I	II	III		I	II	III
1	ICGV 86038	1012	489	586	566	73	69	74	74	19	22	26	22
2	ICGV 86042	953	595	762	461	71	69	73	73	26	20	28	23
3	ICGV 86045	1115	522	809	577	75	66	74	72	29	19	25	23
4	ICGV 86053	1124	650	706	558	72	68	73	71	27	27	25	22
5	ICGV 86055	1128	674	786	616	71	68	72	70	29	22	27	21
6	ICGV 86056	999	535	695	483	71	70	75	75	26	20	23	20
7	ICGV 86060	888	560	773	581	71	64	71	72	29	21	24	23
8	ICGV 86061	1079	704	871	687	72	70	74	72	30	24	27	26
9	ICGV 86063	408	411	555	456	74	65	73	70	36	27	32	30
10	ICGV 86066	1022	578	678	510	73	68	73	71	26	19	23	20
11	ICGV 86014	1048	466	732	553	72	60	70	69	32	24	29	25
12	ICGV 86015	750	424	526	429	67	58	69	70	32	23	30	31
13	ICGV 86081	783	526	859	537	72	68	73	73	28	20	24	20
14	ICGV 86086	838	529	698	555	71	64	71	72	29	20	26	24
15	ICGV 86018	1149	572	522	429	74	69	73	69	34	23	27	19
16	ICGV 86017	1129	430	579	509	75	68	73	69	32	21	25	20
17	ICGV 86091	883	545	777	493	75	68	74	72	25	20	28	22
18	ICGV 86092	958	372	581	515	71	59	69	72	32	26	29	32
19	ICGV 86094	872	531	673	451	68	62	68	66	26	22	27	27
20	ICGV 86103	1231	500	639	465	70	65	69	67	27	20	23	19
21	ICGV 86105	1351	637	859	652	71	66	71	70	37	25	31	27
22	ICGV 86112	1049	595	639	406	73	69	73	67	31	23	28	18
23	ICGV 86117	982	415	538	447	70	68	70	72	24	19	24	21
24	Chico	557	488	422	445	73	72	73	71	21	17	18	18
25	Natalcoman/ Spancross	1153	212	395	338	74	59	72	74	23	15	21	22

Table: 19 Summary of performance of early varieties included in the Third IEGVT

Locations

Rep1:Mahailluppallama (23.10.87) Rep2 Aralaganwila (23.10.87) Rep3 Ruhuna University (3.10.87)

Country SRILANKA

ENTR	ICGV#	PY (kg/ha)	DE	DF	FS (ha)	DM	BMP	HSW	SAU
6	86056	3526	6	24	245833	92.0	75	35	4.7
7	86060	4246	6	25	273611	92.0	73	38	5.7
9	86063	3228	6	26	211111	93.0	73	40	5.3
8	86061	2626	6	24	220833	91.3	72	37	6.0
16	86092	3694	6	25	213889	93.7	72	41	6.0
13	86081	3778	6	24	225000	90.7	73	34	5.7
21	86117	4320	6	24	269444	92.0	72	39	5.0
20	86112	4818	6	28	273611	93.3	74	42	5.3
17	86094	4632	6	25	258333	91.0	72	41	6.0
15	86017	3204	5	26	240278	92.0	70	37	5.3
3	86045	5060	5	25	272222	92.7	76	40	4.3
1	86038	4050	5	24	262500	93.3	75	39	4.7
14	86016	5106	5	26	259722	93.0	76	43	4.7
2	86042	4724	5	24	252778	90.7	74	39	5.3
5	86055	4625	5	24	262500	92.7	74	38	4.7
12	86015	4694	5	26	255555	95.0	73	42	5.3
18	86103	3936	5	25	233333	92.3	73	37	4.7
19	86105	4008	5	25	247222	93.0	73	42	5.3
11	86014	4351	5	25	256944	91.3	71	41	5.0
10	86086	4343	5	24	293056	91.0	74	38	5.0
4	86053	4389	5	25	229167	93.7	72	38	6.0
	Controls:								
22	Chico	2563	6	24	225000	91.3	76	29	6.0
23	No45(LC)	5913	5	25	275000	97.7	74	41	5.0
	SE±	658.8	0.3	0.8	32321.1	1.79		2.1	0.4
	GM	4166.7	5.5	24.9	250301.8	92.55		38.8	5.3
	CV(%)	27.4	9.0	5.7	22.4	3.35		9.4	14.8

Table: 20 Summary performance of early varieties included in the Third IEGVT

Location : Hardoi (INDIA) Season : Rainy 1988
Plot size: 4 x 1.5 m2 Design : Triple Lattice

Entry	E_No	PY (kg/ha)	Rank	% over G-201	FS (%)
ICGV 86091	17	4170	1	227	172898
ICGV 86015	12	2110	2	115	154493
ICGV 86092	18	1780	4	97	168566
ICGV 86014	11	1670	5	91	172391
ICGV 86063	9	1440	6	79	167181
ICGV 86094	19	1220	7	67	129867
ICGV 86086	14	1170	8	64	174868
ICGV 86053	4	1060	9	58	149958
ICGV 86056	6	940	10	52	160447
ICGV 86081	13	830	11	45	154687
ICGV 86055	5	830	11	45	140878
ICGV 86068	10	780	12	42	121444
ICGV 86038	1	780	12	42	131777
ICGV 86061	8	780	12	42	139241
ICGV 86016	15	780	12	42	164889
ICGV 86042	2	780	12	42	154121
ICGV 86103	20	780	12	42	131342
ICGV 86017	16	670	13	36	133767
ICGV 86045	3	670	13	36	143434
ICGV 86112	22	670	13	36	161163
ICGV 86105	21	670	13	36	171838
ICGV 86117	23	560	14	30	150615
ICGV 86060	7	500	15	27	92981
Controls:					
G-201	25	1830	3	100	198981
CHICO	24	280	16	15	55807
SE±.		590.0			10448
GM		1108.9			148288
CV(%)		92.3			12
EF		98.6			101

Table: 21 Summary of performance of varieties includes in the third IEGVT) across locations

Entry	Identity ICGV#	MYANMAR Kg/ha	Rank	MYANMAR Kg/ha	Rank	MYANMAR Kg/ha	Rank	CHINA* Kg/ha	Rank	SUDAN Kg/ha	Rank	NEPAL Kg/ha	Rank	VIETNAM* Kg/ha	Rank	SOMALIA* Kg/ha	Rank	BENIN* Kg/ha	Rank	MALAWI-1* Kg/ha	Rank	MALAWI-2* Kg/ha(1)	Rank	Kg/ha(2)	Rank	MALAWI-3* Kg/ha	Rank	SRILANKA Kg/ha	Rank	NAMIBIA Kg/ha	Rank
1	88038	580	16	520	11	120	7	2580	8	250	19	770	9	2580	2	750	19	1100	8	1388	15	784	17	881	18	785	9	4050	14	700	12
2	88042	520	19	640	5	150	4	2430	11	310	7	530	18	2450	8	1530	1	1000	14	1342	17	881	5	1042	7	833	19	4724	5	700	12
3	88045	870	3	590	8	110	8	1750	22	230	21	800	5	2500	9	980	11	1110	7	1487	9	792	15	1093	3	798	8	5060	2	870	13
4	88053	430	21	690	2	100	11	2000	19	300	3	850	12	2810	3	600	21	1040	11	1501	4	970	3	970	11	775	7	4300	9	1000	9
5	88055	810	13	350	21	110	9	2690	8	300	12	920	4	2910	1	1150	7	1310	6	1589	3	905	2	1093	4	884	3	4825	8	830	11
6	88058	770	7	420	15	130	5	2430	14	250	17	650	10	2120	21	1130	8	1180	4	1407	12	784	11	920	12	644	10	3520	19	940	10
7	88082	900	15	430	13	100	13	2203	15	290	16	920	7	2240	15	950	13	1540	12	1251	19	870	9	1003	5	812	4	4240	13	800	15
8	88001	890	14	390	16	90	18	2840	5	300	13	950	8	2610	7	930	14	1070	9	1489	8	1000	1	1170	2	953	1	2020	22	700	12
9	88003	960	2	370	18	100	13	1710	23	-	-	370	24	2140	19	970	12	970	15	551	25	834	22	758	22	650	17	3220	20	1440	6
10	88058	830	11	280	22	100	12	2842	7	300	4	560	15	2320	14	1280	3	930	19	1490	14	852	7	920	13	722	12	4343	11	780	12
11	88014	780	6	540	9	170	3	2380	15	300	15	-	-	2690	5	1220	5	1210	3	1458	10	782	10	942	8	894	5	4351	10	1070	5
12	88015	900	3	780	1	240	1	2530	9	240	23	1200	1	2780	4	820	17	1270	2	1119	21	683	19	784	21	673	23	4694	9	2110	2
13	88021	430	23	190	24	50	23	1950	24	370	10	420	20	2420	12	1090	10	970	16	1007	22	770	14	903	15	740	10	3730	18	830	11
14	88046	640	12	630	7	120	15	2270	17	40	25	830	13	2370	13	930	14	950	18	899	23	824	13	977	10	773	8	-	-	1170	8
15	88018	560	17	420	14	50	22	2740	10	300	11	370	3	2120	20	970	12	890	20	1552	6	829	8	778	23	622	20	5160	2	700	12
16	88017	370	24	380	19	50	24	1980	20	340	6	780	25	1690	25	1220	5	1010	13	1505	7	834	21	790	19	730	11	3294	21	870	13
17	88091	780	5	930	6	80	20	1810	21	220	5	870	11	2750	10	890	18	1120	5	1177	20	808	18	1056	8	845	15	-	-	4175	1
18	88092	810	4	240	23	90	16	2520	12	240	19	950	2	2240	16	870	16	1480	1	1349	16	825	23	943	17	777	13	3894	18	1100	4
19	88094	700	8	350	20	140	6	2420	13	260	7	740	7	2520	10	820	17	1250	10	1221	18	852	12	986	9	697	15	4632	7	1270	7
20	88103	470	22	530	10	100	14	3080	2	460	2	720	8	2540	6	720	22	960	17	1759	2	773	16	920	14	693	14	3930	16	790	12
21	88105	530	18	290	17	90	19	3220	3	310	8	420	21	3090	23	1270	4	930	25	1963	1	953	4	1284	1	929	2	4900	15	970	3
22	88112	360	25	850	4	70	21	3000	4	320	9	320	22	2290	22	1190	9	900	23	1427	11	858	6	875	16	808	24	4810	6	870	13
23	88117	530	12	500	12	90	17	2420	2	270	9	870	10	2490	17	900	15	750	24	1483	13	811	24	778	20	829	22	4320	12	900	14
24	CHICO	500	20	70	25	30	25	1870	25	110	22	320	23	1920	24	1 50	9	870	22	782	24	841	20	579	24	623	21	2563	23	260	10
25	L.Check	1530	1	660	3	190	2	4940	1	710	1	830	4	2220	17	1350	2	820	21	1558	5	350	25	551	25	442	25	5913	1	1030	3
	SE±	120.0		80.0		20.0		230.0		40.9		100.9		30.0		200.0		160.2		120.5		87.0		72.0		41.2		850.3		890.3	
	CV	850.0		401.6		120.9		2422.0		300.9		823.1		2282.3		1021.9		1011.1		1350		770		914		710		4 80 *		110.9	
	CV%	31.0		31.1		30.3		16.2		17.2		21.7		2.3		33.5		20 *		10.2		15.9		13.0		10.2		2*.4		92.3	
	EF	138.0		100.7		101.5		101.0		103		103.6		104.0		81.3		100.4										880		90.9	

* used in multilocation analysis

Table: 22 Analysis of variance for stability of pod yield of varieties in the Third IEGVT

Source of Variation	DF	SS	MS
VARIETIES	24	3951185.500	164632.734
ENV+(VARIETIES X ENVIROMENTS)	175	99181896.000	
ENVIRONMENT (LINEAR)	1	83888408.000	
VARIETY X ENVIRONMENT (LINEAR)	24	5737112.000	
POOLED DEVIATION	150	9736403.000	64909.352
VARIETIES			
1	6	161825.000	
2	6	259609.500	
3	6	382470.875	
4	6	553288.750	
5	6	49791.500	
6	6	84639.500	
7	6	35550.500	
8	6	125233.500	
9	6	432031.000	
10	6	102965.750	
11	6	84629.000	
12	6	211021.000	
13	6	353989.375	
14	6	187019.250	
15	6	129189.750	
16	6	198242.375	
17	6	153230.750	
18	6	297651.750	
19	6	65953.750	
20	6	334427.500	
21	6	1059263.000	
22	6	463480.250	
23	6	47113.000	
24	6	537048.875	
25	6	3436537.000	
POOLED ERROR	384	7053054.500	18367.330

Table: 23 Mean yield and stability parameters of the varieties in the Third IEGVT

ENTRY	TRTMEAN	REGCOF	TREG	STABPARM	TSTAB
1	1370.750	1.243	1.746	8603.504	1.468
2	1436.000	1.029	0.205	24787.420	2.348
3	1313.750	0.774	-1.824	42044.484	3.289
4	1350.750	0.978	-0.156	74847.461	5.075
5	1551.500	1.150	1.075	-10068.747	0.452
6	1321.375	0.899	-0.724	-4280.747	0.768
7	1318.250	0.866	-0.965	-12442.247	0.323
8	1508.500	1.102	0.733	2504.920	1.136
9	1047.875	0.748	-1.811	53637.838	3.920
10	1383.750	1.022	0.161	-1206.371	0.934
11	1449.250	1.019	0.138	-4262.497	0.768
12	1308.625	1.171	1.230	16802.838	1.915
13	1204.750	0.758	-1.751	41464.234	3.257
14	1249.000	0.932	-0.488	12802.545	1.597
15	1236.500	0.897	-0.812	3164.295	1.172
16	1205.375	0.875	-2.333*	14673.064	1.793
17	1200.500	0.719	-2.020*	7171.129	1.390
18	1328.000	0.984	-0.112	31241.295	2.701
19	1327.000	1.029	0.210	-7375.038	0.598
20	1427.625	1.235	2.121*	37370.590	3.035
21	1527.375	1.086	0.619	158176.500	9.612
22	1355.750	1.116	0.830	58879.383	4.206
23	1246.500	1.131	0.942	-10515.164	0.428
24	943.250	0.492	-3.645**	71140.820	4.673
25	1513.375	1.896	5.432**	554388.875	31.183

GRAND MEAN 1325.0150

STANDARD EROR OF BETA 0.1392
STANDARD ERROR (MEAN) 96.2952

* = Significiant at 0.05 probability level
** = Significiant at 0.01 probability level

Table: 24 Days to harvest of varietes included in the Third IEGVT across locations

Entry#	Identity ICCV#	MYANMAR BIFS	MYANMAR YEGIN	MYANMAR MANDALAY DIV	CHINA	SUDAN	NEPAL	VIETNAM	ETHIOPIA	BENIN	MALAWI-1	MALAWI-2 (1)	MALAWI-2 (2)	MALAWI-3	SRILANKA	INDIA (Hardoi)	MEAN*
1	86038	89.0	93	116	124	79	110	113	106	88	104	107	117	110	91.0	109	99.4
2	86042	88.0	93	99	124	76	110	113	100	90	104	107	117	110	88.5	111	97.5
3	86045	89.0	91	103	124	79	110	113	106	86	104	107	117	110	91.5	109	97.6
4	86053	88.7	94	105	124	79	110	113	100	88	104	107	117	110	93.0	109	98.4
5	86055	88.0	91	118	124	78	110	114	100	90	104	107	117	106	90.0	109	98.8
6	86056	88.0	93	96	124	79	110	114	100	86	104	107	117	110	90.5	109	97.0
7	86060	88.0	93	125	124	76	110	114	100	90	111	107	117	110	90.5	111	101.1
8	86061	88.0	93	107	124	79	110	113	100	90	111	107	117	110	88.0	109	98.8
9	86063	90.0	94	109	124	-	110	115	100	92	104	107	117	110	88.5	109	101.3
10	86066	88.0	93	113	124	78	110	113	100	89	111	107	117	106	89.0	109	98.9
11	86014	90.0	94	113	124	79	-	113	100	92	111	107	117	110	88.0	115	100.5
12	86015	93.0	93	106	124	80	110	113	100	86	111	107	117	110	91.5	111	99.5
13	86081	88.7	91	121	124	79	110	113	100	70	111	107	117	110	88.5	109	98.1
14	86056	90.0	94	96	124	85	110	114	100	86	111	107	117	110	91.5	115	99.2
15	86016	88.0	94	113	124	79	110	116	100	90	103	107	117	97	92.0	111	98.3
16	86017	89.0	94	113	124	79	110	116	100	92	103	107	117	101	90.5	109	98.6
17	86091	90.0	91	117	124	79	110	115	100	90	111	107	117	110	91.5	109	100.2
18	86092	93.0	93	82	124	79	110	113	100	90	111	107	117	110	91.5	111	97.3
19	86094	90.0	93	89	124	81	110	113	100	92	111	107	117	110	89.0	111	97.8
20	86103	88.0	91	124	124	79	110	113	100	89	111	107	117	106	89.5	111	100.6
21	86105	88.0	93	119	124	80	110	113	100	90	111	107	117	110	90.5	111	99.7
22	86112	89.3	91	93	124	79	110	113	100	88	103	107	117	101	92.5	111	98.6
23	86117	90.0	94	125	124	79	110	113	100	92	111	107	117	110	89.0	115	101.8
24	CHICO	85.0	91	112	124	78	110	113	100	88	103	107	117	106	89.5	107	97.1
25	L.Check	88.0	93	106	124	79	110	116	100	90	104	107	117	110	97.5	120	100.3

* Excluding China,Nepal,Somalia,Malawi-2(1,2),where all entries were harvested on the same day

Table: 25 Shelling percentage of varieties included in the Third IEGVT across locations

Entry#	Identity ICGV#	MYANMAR	MYANMAR	MYANMAR	CHINA	SUDAN	NEPAL	VIETNAM	SOMALIA	BENIN	MALAWI-1	MALAWI-2 (1)	MALAWI-2 (2)	MALAWI-3	SRILANKA	MEAN 1	MEAN 2
1	86038	65.3	76.2	66.9	77.2	71	-	77.1	56.5	46	73	69.3	73.6	74.1	75	69.2	69.4
2	86042	65.7	71.0	62.2	74.5	70	-	76.4	61.0	57	71	69.0	73.2	72.5	76	69.4	69.1
3	86045	67.0	71.1	71.0	72.8	71	-	76.2	59.3	61	75	65.7	74.1	72.4	77	68.0	73.7
4	86053	66.0	76.6	70.9	75.0	71	-	75.6	59.3	70	72	67.6	72.7	71.5	73	68.7	72.0
5	86055	67.7	75.7	70.4	75.5	69	-	78.1	59.6	63	71	69.4	72.0	69.7	74	68.9	71.0
6	86056	65.0	76.1	69.9	77.0	62	-	76.1	60.8	63	71	70.2	75.1	74.8	76	70.8	70.7
7	86060	67.7	72.2	69.0	74.5	66	-	78.0	59.7	61	71	64.1	71.4	71.6	75	67.4	72.4
8	86061	69.7	76.8	70.9	77.5	68	-	78.6	59.5	63	72	70.4	74.1	72.2	73	70.4	71.6
9	86063	68.3	75.2	72.6	77.5	-	-	77.1	51.6	62	74	64.6	73.0	70.6	74	66.7	71.7
10	86066	65.7	77.1	71.2	77.2	72	-	78.1	53.5	55	73	67.9	73.3	71.0	75	68.0	70.9
11	86014	66.0	72.0	70.9	75.0	70	-	76.4	54.5	70	72	59.5	70.2	66.6	74	64.0	71.1
12	86015	67.3	74.9	69.7	77.3	55	-	74.2	51.9	56	67	58.2	69.0	69.8	75	64.1	68.8
13	86081	66.3	75.7	71.8	75.4	61	-	77.7	59.5	63	72	67.4	73.0	73.1	73	68.8	70.4
14	86086	65.0	72.3	61.4	75.0	34	-	75.7	53.6	65	71	64.0	71.5	71.5	74	66.0	65.3
15	86016	69.0	73.7	64.1	74.5	69	-	78.6	46.8	58	74	69.0	72.7	68.5	77	65.8	70.2
16	86017	66.7	73.4	62.1	75.5	66	-	78.6	46.7	70	75	67.9	72.7	69.2	71	65.7	71.1
17	86091	61.3	77.9	68.8	76.5	75	-	73.0	56.3	50	75	67.5	73.7	72.2	76	68.5	70.0
18	86092	64.7	72.3	64.9	74.0	69	-	70.5	55.4	59	71	59.3	69.1	72.1	74	64.5	68.6
19	86094	68.0	70.5	63.5	72.0	55	-	73.2	60.9	59	66	62.2	69.2	65.7	74	65.9	66.1
20	86103	62.7	71.7	64.4	75.0	65	-	77.5	46.7	59	70	64.7	69.0	67.4	74	63.9	68.0
21	86105	66.3	71.0	62.2	75.0	57	-	74.9	57.2	69	71	66.2	71.3	70.4	75	67.4	70.8
22	86112	64.0	71.5	57.8	72.2	59	-	74.8	55.6	59	73	69.5	72.8	67.5	76	67.5	67.1
23	86117	63.7	72.9	61.6	75.5	67	-	76.1	56.5	77	70	67.6	69.6	72.2	76	67.3	70.7
24	CHICO	66.3	77.0	69.3	76.0	69	-	76.2	57.4	55	73	72.0	73.2	71.1	77	70.2	70.4
25	L.Check	64.3	76.4	65.9	71.2	74	-	78.3	54.1	57	74	59.2	71.7	74.2	76	64.1	71.5

MEAN 1 = of those locations where harvesting of all lines was done on the same day
MEAN 2 = " " " " " different days

Table 26 100 Seed weights of varieties included in the Third ICRI across four

Entry#	Identity ICGV#	MYANMAR	MYANMAR	MYANMAR	CHINA	SUDAN	NEPAL	VIETNAM	SOMALIA	BENIN	MALAWI-1	MALAWI 2 (1)	(2)	MALAWI-3	SRILANKA
1	86039	26.2	30.9	28.0	-	45	-	48.4		40	19	21.6	25.7	21.9	36.3
2	86042	28.4	37.6	29.5	-	37	-	51.6	-	35	26	20.1	28.1	24.4	37.6
3	86045	29.1	30.8	26.1	-	37	-	43.1		30	29	16.6	25.5	23.1	30.8
4	86053	25.8	27.6	23.4	-	37	-	42.3	-	35	27	26.7	25.3	21.7	34.0
5	86055	29.6	31.2	27.5	-	38	-	51.2	-	40	29	22.4	26.7	21.6	35.3
6	86056	25.1	28.3	29.9	-	35	-	47.9	-	30	26	19.7	23.4	20.6	32.9
7	88060	25.3	32.2	29.6	-	38	-	54.8	-	40	29	20.6	24.0	23.3	33.0
8	86061	29.3	29.2	26.4	-	42	-	49.4	-	30	30	23.6	26.9	25.6	34.0
9	86063	33.8	36.7	35.0	-	-	-	52.3	-	40	36	26.8	32.0	29.2	35.8
10	86066	32.3	29.9	27.7	-	43	-	48.6	-	40	26	19.4	23.2	19.5	34.6
11	86014	29.6	33.1	33.9	-	44	-	52.5	-	40	32	21.8	29.1	25.0	38.0
12	86015	30.1	35.4	35.3	-	42	-	56.1	-	40	32	23.1	29.9	31.7	40.0
13	86081	24.4	29.3	26.4	-	38	-	51.2	-	35	28	20.2	24.2	20.2	32.1
14	86086	28.4	27.9	22.6	-	34	-	46.5	-	30	29	19.9	25.9	23.4	36.7
15	86016	29.4	38.9	27.6	-	45	-	50.6	-	40	34	22.8	26.6	18.9	38.0
16	86017	30.3	38.5	28.7	-	41	-	54.3	-	40	32	21.2	25.1	20.4	33.9
17	86091	26.5	30.7	25.5	-	38	-	51.1	-	35	25	19.7	25.5	22.4	40.0
18	86092	32.6	27.6	24.7	-	36	-	44.7	-	40	32	25.9	29.4	33.1	39.1
19	86094	32.3	31.9	29.7	-	42	-	60.0	-	40	26	22.3	27.3	26.7	36.2
20	86103	31.8	32.3	30.4	-	41	-	47.5	-	40	27	20.1	23.1	18.5	36.1
21	86105	31.1	35.3	30.6	-	36	-	53.8	-	40	37	24.6	31.3	25.8	38.9
22	86112	35.5	33.9	27.5	-	44	-	51.0	-	35	31	22.6	25.8	17.8	39.3
23	86117	27.2	28.2	27.9	-	37	-	40.9	-	30	24	19.1	23.5	20.2	35.0
24	CHICO	20.8	24.2	15.1	-	29	-	31.4	-	25	21	17.1	18.4	17.9	28.4
25	L.Check	41.7	41.4	36.4	-	38	-	44.9	-	40	23	14.8	20.7	20.9	39.4
	SE+	2.0						0.2				1.24	0.77	1.05	2.8
	GM	29.6						49.0				21.4	25.8	23.0	35.9
	CV(%)	11.8						0.5				10.1	5.2	7.9	10.1